

**BY ORDER OF THE COMMANDER
442D FIGHTER WING**

**442D FIGHTER WING INSTRUCTION
21-128**



21 AUGUST 2013

Maintenance

**AIRCRAFT MAINTENANCE DURING
ADVERSE OR SEVERE WEATHER**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Colonel James P. Brock, Jr)

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This instruction implements Air Force Instruction (AFI) 91-203, *Air Force Consolidated Occupational Safety Instruction*. This instruction establishes procedures and assigns responsibilities for securing aircraft and equipment assigned to the 442d Fighter Wing (FW), including evacuation, when severe or adverse weather is forecast or present. These procedures supplement those listed in Technical Order (T.O.) 1A-10 A-2-1-1, 1A-10C-2-1-1, *Organizational Maintenance General Equipment Manual*, T.O. 1A-10A-2-1-3, 1A-10C-2-1-3, *Organizational Maintenance Cross Servicing Guide*, and Whiteman Air Force Base Instruction (WAFBI) 15-111, *Base Weather Support Document*. These procedures apply to all personnel assigned to the 442d Operations Group and the 442d Maintenance Group (MXG). All supervisors are responsible for ensuring compliance with this instruction. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. This document clarifies Lightning Watch and Lightning Warning verbiage, standardizes nautical units and definitions.

1. Procedures and Responsibilities:

1.1. When a severe weather warning or watch is received from the current base weather system, provided by the 509th Operations Support Squadron (OSS)/ Operations Support Weather (OSW), the 442d MXG Maintenance Operations Center (MOC) will implement Severe Weather Checksheet Number 31. The production superintendent will coordinate with the Supervisor of Flying (SOF) and Munitions Control to ensure actions are taken to make aircraft ground handling as safe as possible.

1.2. The production supervisor will determine what maintenance is essential for the safety of personnel and protection of aircraft and equipment. He, or she, will coordinate with the 303d Fighter Squadron (FS) SOF to cross-check weather data and consult on necessary actions.

1.3. The 303 FS SOF will be the primary interface with the Whiteman Air Force Base (WAFB) weather flight and through coordination with production superintendent via MOC, be the primary decision-making authority for required actions based on all weather data, forecasts, observations, watches and warnings. MOC will monitor Joint Environmental Toolkit (JET) to ensure they get weather warnings as soon as they are issued. If the 303 FS SOF cannot be reached or decision making time is critical, the production superintendent/night shift supervisor will take appropriate action IAW this instruction to safeguard 442 FW personnel and assets. MOC will coordinate with base weather only when SOF is not on duty.

1.4. If weather conditions dictate hangaring of aircraft in excess of 442d hangar capacities, the production superintendent, via 442d MOC, will request emergency use of 509th facilities, through 509th MOC.

2. Weather General.

2.1. WAFB weather forecasts, watches and warnings are produced by two weather sources, the 509 OSS/OSW and the 26th Operational Weather Squadron (OWS), Barksdale Air Force Base (AFB), which is the hub that services the eastern United States. The 509 OSS/OSW is the sole source of weather observations at WAFB and will be considered as the singular official source for real-time weather data.

2.2.1. The following terms and definitions can be referenced in WAFBI 15-11, *Base Weather Support Plan*, and are pertinent to the applications of this instruction and weather based decisions: Observation, Forecast, Watch and Warning. They are paraphrased as follows:

2.2.1.1. Observation: Current weather conditions actually occurring at or near the airfield. Observations are taken at regular intervals or out of cycle when changing weather conditions warrant. Current observation reports include ceiling, visibility, precipitation, thunderstorms, lightning, winds, etc. The local observation is produced by the 509 OSS/OSW.

2.2.1.2. Forecast: Predicted weather conditions for a specified time in the future based on current conditions, observations at other stations, weather instrumentation and charts, and weather models. Forecasts are produced for WAFB by the 26 OWS, Barksdale AFB, but can be modified by the 509 OSS/OSW via their own locally produced forecast.

2.2.1.3. Watch: A weather watch is a special notice provided to support customers that alerts them of a potential for weather conditions of such intensity as to pose a hazard to life or property for which the customer must take protective action. Whenever meteorological conditions are favorable or forecast to be favorable for such conditions to develop, the 26 OWS will issue a weather watch, for WAFB, valid for a given time period. Personnel should refrain from calling 509 OSS/OSW unless it is absolutely necessary. The text of the weather watch will contain all essential information. Watches are issued to alert organizations to the potential for occurrence of certain elements for planning/preparation purposes. Weather Watches may not always result in Advisories or Warnings.

2.2.1.4. Warning: A weather warning is a special notice provided to supported customers that alerts them to weather conditions of such intensity as to pose a hazard to life or property. The 26 OWS and 509 OSS/OSW issue weather warnings, upgrades/downgrades, extensions and cancellations for a five nm radius of the runway midpoint (unless otherwise stated in the text of the warning e.g. observed lightning within 10 nm).

2.2.2. Watches and Warnings are produced by both 509 OSS/OSW and 26 OWS, Barksdale's weather flight.

2.2.3. It is critical that the 303 FS SOF and the 442d Aircraft Maintenance Squadron (AMXS) production superintendent have a clear knowledge of the meaning of all the aforementioned weather terminology and understand the difference between watches, warnings, forecasts and observations. The 303 FS SOF will decide on the appropriate course of action when weather conditions and predictions fall within the margins of clear guidance provided below. If the 303 FS SOF cannot be reached or decision making time is critical, the production superintendent/night shift supervisor will take appropriate action IAW this instruction to safeguard 442 FW personnel and assets.

3. General Lightning:

3.1. The following procedures will be implemented when WAFB issues lightning Advisories Watches or Warnings:

3.1.1. Lightning Advisory within 25 nautical miles: 303 FS SOF will continue to monitor weather and advise the Production Superintendent of any planned actions. 442 MOC will inform all agencies that lightning has been observed within 25 nautical miles.

3.1.2. Lightning Watch: A Lightning Watch will be issued approximately 30 minutes prior to lightning within five nautical miles. 442 MOC will inform all agencies that a Lightning Watch has been issued, indicating the potential exists for lightning within five nautical miles. During a Lightning Watch, operations or activities may continue. However, all personnel must be prepared to implement Lightning Warning procedures without delay. Personnel engaged in explosives operations at outdoor locations will initiate controlled termination procedures IAW MOI 91-204, *MUNITIONS HANDLING PROCEDURES DURING SEVERE WEATHER/ELECTRICAL AND / OR THUNDERSTORM WARNINGS*.

3.1.3. Lightning Warnings:

3.1.3.1. Lightning within 10 nm (Observed): 303 FS SOF approves aircraft launch and recovery based on weather situation and will coordinate with the Production Superintendent. The Production Superintendent will determine what essential maintenance continues and will prioritize maintenance actions if lightning within 5 nm is imminent. Fuel cell maintenance, Egress maintenance and flight line explosive loading operations will terminate.

3.1.3.2. Lightning within 5 nm (Observed): 442 MOC will inform all agencies that a Lightning Warning has been issued for observed lightning within 5 nm. All outdoor operations will cease and personnel will seek shelter.

4. Tornado or High Winds:

4.1. If local winds in excess of 30 knots are reported at WAFB, fuel cell maintenance on the flight-line will be terminated.

4.2. If forecasted winds are expected to exceed 40 knots, the aircraft will be moored to the ground. Remove all maintenance stands and loose equipment from parking apron and secure. If space and time permit, place non-powered support equipment inside hangars and docks. Remove fire extinguishers not in use and park on the edge of ramp. Support equipment outdoors will be secured.

4.3. If winds exceed 55 knots aircraft will be hangared. Implement procedures in paragraph 1.3 if necessary.

5. Wet Bulb Temperatures: As a general rule, when the wet bulb temperature reaches 94 degrees, maintenance will be curtailed to mission essential requirements. Outside work requirements must be evaluated by the applicable maintenance supervision from the 442 MXG to determine mission essential requirements. Detailed guidance is found in WAFBI 48-103, *Heat and Cold Stress Guidance*.

6. Wind Chill: As a general rule, when the equivalent chill temperature is -25 degrees Fahrenheit, the outside work requirements must be evaluated by the applicable maintenance supervision from the 442 MXG to determine mission-essential requirements. Detailed guidance is found in WAFBI 48-103, *Heat and Cold Stress Guidance*.

7. Hail, Snow and/or Freezing Precipitation:

7.1. When 1/2 inch hail or larger is forecasted, the aircraft will be sheltered, or hangared. The production superintendent or night-shift supervisor will make the decision to hangar the aircraft when snow or freezing precipitation is forecasted.

7.2. The production superintendent or night-shift supervisor will determine when snow and/or ice covered aircraft parking ramps are suitable for aircraft maintenance operations. The scope of maintenance will be limited until the aircraft parking ramp has been cleared or treated for ice and snow removal.

8. Non-Duty Hours:

8.1. In the event of a weather warning during non-duty hours, the squadron superintendents will be notified. If required, the squadron superintendents will form a severe weather team consisting of a maintenance supervisor and six mechanics. The superintendents will ensure

the right combination of personnel with the applicable qualifications are assembled to handle any requirements associated with the severe weather.

8.2. All maintenance personnel will be subject to recall if it becomes necessary to evacuate aircraft. After determining workload requirements, flight chiefs will recall personnel from leave as necessary and recommend priority of evacuation. 442 AMXS personnel will be responsible for enroute maintenance team with tools and equipment, if required.

HUBERT C. HEGTVEDT, Col, USAFR
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, 15 Jun 2012
AFMAN 91-201, *Explosives Safety Standards*, 13 Jan 2011
T.O. 1A-10A-2-1-1, *Organizational Maintenance General Equipment Manual*, 10 Nov 2008
T.O. 1A-10C-2-1-1, *Organizational Maintenance General Equipment Manual*, 1 Aug 2009
T.O. 1A-10A-2-1-3, *Organizational Maintenance Cross Servicing Guide*, 10 July 2007
T.O. 1A-10C-2-1-3, *Organizational Maintenance Cross Servicing Guide*, 1 Aug 2009
WAFBI15-111, *Base Weather Support Document*, 30 May 2012
WAFBI48-103, *Heat and Cold Stress Guidance*, 20 Apr 1999

Adopted Forms:

AF IMT 847, *Recommendation for Change of Publication*, 22 September 2009

Abbreviations and Acronyms

AFB—Air Force Base
AFPD—Air Force Policy Directive
AFOSHSTD—Air Force Occupational Safety and Health Standard
AMXS—Aircraft Maintenance Squadron
FS—Fighter Squadron
FW—Fighter Wing
FWI—Fighter Wing Instruction
IAW—in accordance with
JET—Joint Environmental Toolkit
MOC—Maintenance Operations Center
MXG—Maintenance Group
NM—nautical miles
OSS—Operations Support Squadron
OSW—Operations Support Weather
OWS—Operational Weather Squadron
SOF—Supervisor of Flying
T.O.—Technical Order
WAFB—Whiteman Air Force Base

WAFBI—Whiteman Air Force Base Instruction